

PREVALENCE OF POST TRAUMATIC STRESS DISORDER AMONG BASRAH MEDICAL STUDENTS

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ABSTRACT

Background Post traumatic stress disorder is an anxiety disorder characterized by the emergence of core symptoms of the disorder after exposure to an extreme traumatic experience. Traumatic events that may cause Post Traumatic Stress Disorder includes violent assault, kidnapping, sexual assault, torture, being a hostage, prisoner of war, experiencing a disaster, violent automobile accidents or getting a life threatening illness.

Methodology A cross-sectional study was carried out to estimate the prevalence of trauma and probable Post Traumatic Stress Disorder among the students of Basrah Medical College in 2007. A sample of 60 students was selected randomly from each class.

A special questionnaire form was developed for the purpose of the study, containing the self – rating inventory for Post Traumatic Stress Disorder.

Results The results of the present study showed that 238 (66.1%) students had reported being exposed to traumatic event during their life. The percentage of females who were exposed to trauma was slightly higher than that of males (67.8% vs 64.4%). Out of the total studied students, 211 (58.6%) students fulfilled the symptom criteria for Post Traumatic Stress Disorder, thus assessed as probable Post Traumatic Stress Disorder.

INTRODUCTION

Trauma and its psychiatric consequences normally gain attention in times of war and national disaster. World wars I and II were accompanied by descriptions of sequels to mental trauma that went under different names: shell shock syndrome, and war sailor syndrome and the Konzentrationslager syndrome (KZ syndrome).^[1] The concept of post traumatic stress disorder (PTSD) was introduced in Diagnostic and Statistical Manual of Mental Disorder-III (DSM-III) after the Vietnam war.^[1] Post traumatic stress disorder is an anxiety disorder characterized by the emergence of core symptoms of the disorder after exposure to an extreme traumatic experience.^[2] These traumatic experiences are relatively common, more than two thirds of persons in the general their lives, and up to one fifth of people in the United States may experience such an event in any given year.^[3] Traumatic events that may cause PTSD includes violent assault, kidnapping, sexual assault, torture, being a hostage, prisoner of war, experiencing a disaster, violent automobile accidents or getting a life threatening illness.^[4]

Although most people encounter trauma over a lifetime,^[5] recent studies indicate that almost eight percent of Americans will experience PTSD at some time in their lives.^[6] Responses to such an experience include intense fear, helplessness, or horror. The core symptoms of PTSD include re-experiencing the traumatic event, avoidance of trauma-related stimuli, numbing of general responsiveness, and signs of increased arousal. For the diagnosis of PTSD to be given, these symptoms must cause clinically significant distress or impairment in one or more important areas of functioning.^[2,4,6] PTSD is emerging as a major public health problem worldwide.^[7] Epidemiological studies within Australia and America identified rates of PTSD within the general population as 1.3% (DSM-IV criteria), 3.3% International Classification of Mental and Behavioral Disorders 10 criteria (ICD 10 criteria), and 7.8% (DSM-III-R criteria).^[5,8] PTSD is believed to occur in all ages for substantial number of individuals with prevalence rate ranging from 3-58% in individuals exposed to highly traumatic events.^[2] In countries with high levels of

violence like the situation in Iraq in the last decades, the people are exposed to many types of trauma everyday (explosion, homicide, kidnapping, migration, an explosive laden cars), and in spite of these extremely violent situations, very few epidemiological studies regarding trauma and PTSD have been carried out in Iraq.^[9,10]

The aim of the present study is to estimate the prevalence of trauma and probable PTSD among Basrah medical students.

METHODOLOGY

A cross-sectional study was carried out to estimate the prevalence of trauma and probable PTSD among the students of Basrah Medical College in 2007. A sample of 60 students was selected randomly from each class (a total of 360 students). A special questionnaire form was developed for the purpose of the study. It was self-administered, completed and returned by the involved students. It included information covering the following aspects; age, sex, place of residence, marital status, exposed to trauma or not, and types of trauma. The questionnaire also involved the self-rating inventory for Post Traumatic Stress Disorder^[11], which was used in its 22 item diagnostic version in order to differentiate subjects with probable PTSD from those without. The items reflect the 17 PTSD core symptoms according to the B,C and D criteria in DSM-IV.^[4] All items were scored on a four point scale, measuring the intensity of each symptom, where three and four were judged as affirmative answers. If at least one item from B-criterion (the intrusion), three items from/the C-criterion (avoidance) and two items from the D-criterion (hyper arousal) were answered affirmatively, the person was assessed as afflicted with probable PTSD.

Statistical Package of Social Sciences version 11 was used for analysis of data. Chi-squared test was used to determine association between different variables and P<0.05 was considered to be statistically significant.

RESULTS

The study involved 360 medical students, all of them responded to the study. Mean age was 23.2±1.6 years. Out of them 177(49.2%) were males and 183 (50.8%) were females.

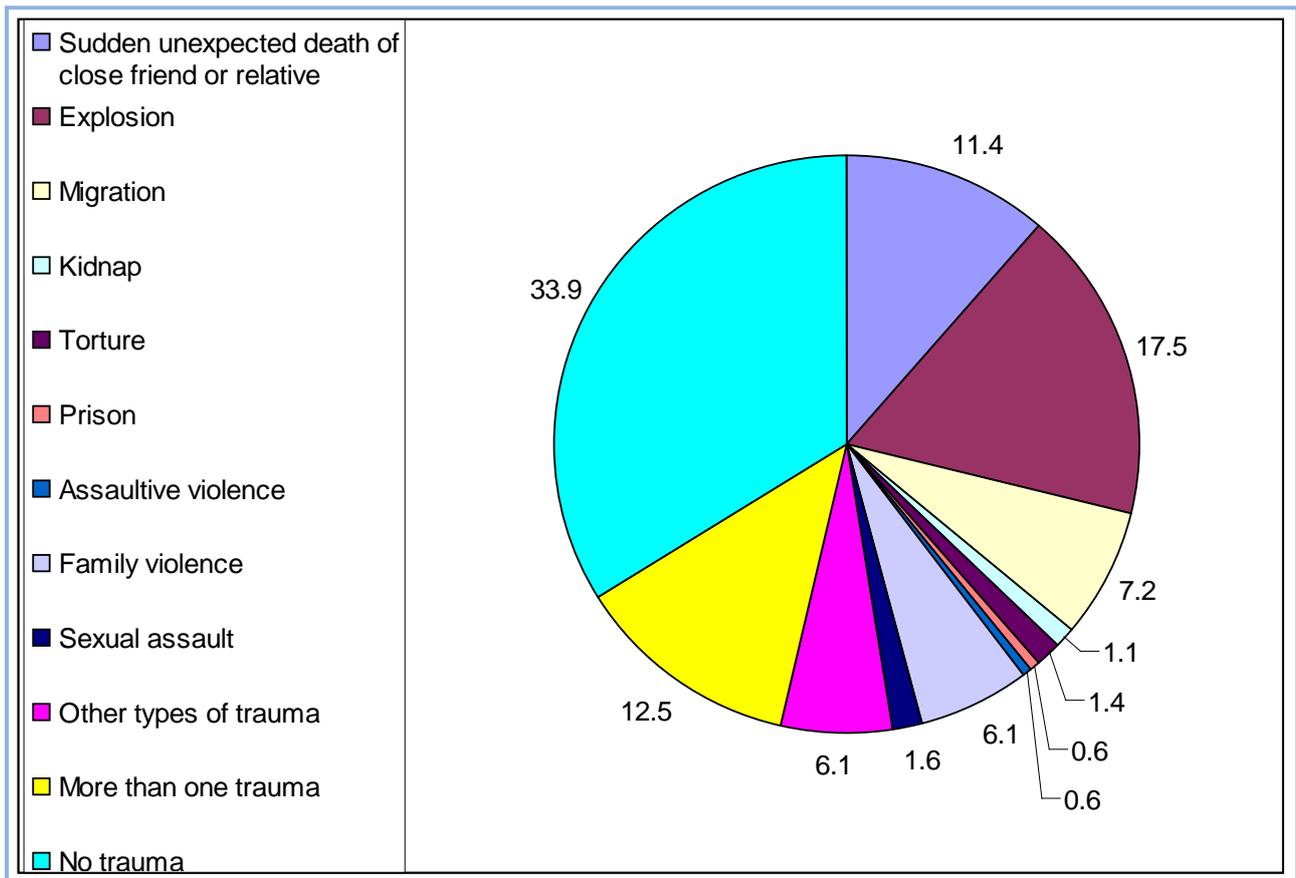
Table-1 shows, the prevalence of trauma among the studied students according to sex. Of all studied students, 238(66.1%) reported being exposed to traumatic events during their life; The percentage of females who were exposed to trauma was slightly higher than that of males (67.8% vs 64.4%), but no significant difference was noted. (Chi-square = 0.451, P-value = 0.502).

Table 1. Prevalence of trauma among study students according to sex.

		TRAUMA				TOTAL	
		Present		Absent			
		No.	%	No.	%		
Sex	Male	114	64.4	63	35.6	177	100.0
	Female	124	67.8	59	32.2	183	100.0
Total		238	66.1	122	33.9	360	100.0

Chi-square = 0.451 df = 1 P =0.502

The distribution of the studied students according to the type and number of trauma event exposed to it is shown in graph 1; Of all the studied students, 53.6% reported being exposed to one traumatic event, and 12.5% were exposed to more than one during their life; 17.5% were exposed to explosion, followed by sudden un expected death of closed friend or relative (11.4%).



Graph 1. Distribution of the students according to types of trauma

All the studied students responded satisfactorily to PTSD symptomatic instrument; 211 (58.6%) students fulfilled the symptom criteria for PTSD, thus assessed as probable PTSD, and 149 (41.4%) students were regarded as being non – PTSD, (Table–2). This table also shows that 71.4% of those who were exposed to trauma

during their life had probable PTSD, and 33.6% regarded as non–PTSD; The difference between those who were exposed to trauma and subsequent development of PTSD was statistically significant, (Chi-square = 47.562, P – value < 0.01)

Table 2. Prevalence of probable PTSD according to exposure to trauma.

		Probable PTSD				Total	
		Positive		Negative			
		No.	%	No.	%	No.	%
Trauma	Exposed	170	71.4	68	28.6	238	100.0
	Not exposed	41	33.6	81	66.4	122	100.0
Total		211	58.6	149	41.4	360	100.0

Chi-square = 47.562

df = 1

P – value < 0.01

The prevalence of probable PTSD according to sex is shown in Table-3; The prevalence of probable PTSD among the females (69.4%) was

higher than that in males (47.5%), and this difference was statistically significant, (Chi-square = 17.856, P – value < 0.01).

Table 3. Prevalence of probable PTSD according to sex.

		Probable PTSD				Total	
		Positive		Negative			
		No.	%	No.	%	No.	%
Sex	Male	84	47.5	93	52.5	177	100.0
	Female	127	69.4	56	30.6	183	100.0
Total		211	58.6	149	41.4	360	100.0

Chi-square = 17.856 df = 1 P – value < 0.01

The prevalence of probable PTSD according to residency is shown in Table–4. The prevalence of probable PTSD was higher among students from other governorates (76.6%) than those

from Basrah (51.0%), and this difference was statistically significant, (Chi-square = 20.39, P-value < 0.01)

Table 4. Prevalence of probable PTSD according to place of residence.

		Probable PTSD				Total	
		Positive		Negative			
		No.	%	No.	%	No.	%
Place of residence	Basrah	129	51.0	124	49.0	253	100.0
	Other	82	76.6	25	23.4	107	100.0
Total		211	58.6	149	41.4	360	100.0

Chi-square = 20.390 df = 1 P – value < 0.01

DISCUSSION

Post traumatic stress disorder is believed to be caused by either physical trauma, or psychological trauma, or more frequently a combination of both.^[4] The possible sources of trauma include experiencing or witnessing childhood or adult physical, emotional, or sexual abuse.^[4] Trauma and PTSD may have an impact on a student's ability to maintain their normal cognitive skills during certain period right when PTSD first shows up.^[12] The aim of the present study was, therefore, to estimate the prevalence of trauma and PTSD among Basrah medical students; The study showed that approximately two thirds of the students reported being exposed to traumatic events during their life, like explosion, sudden unexpected death of close friend or relative, migration or other types of trauma, and the

percentage of the female students who were exposed to trauma was slightly higher than that of male students. A study was done in Detroit showed that the lifetime prevalence of exposure to any trauma was 89.6%.^[4] This result was confirmed by another study done in Stockholm, Sweden which revealed that 89% of the respondents had experienced at least one trauma during their life.^[13] Although most trauma victims report a significant distress immediately following trauma, it has been estimated that only 9% of trauma victims will develop chronic PTSD.^[13] However, because the incidence of traumatic exposure is much higher than was once believed, a significant number of individuals are likely to be affected by PTSD. Specifically, estimates of exposure to at least one potentially traumatic event across the

lifespan have ranged from 50-90% in large scale epidemiological studies.^[5,13] Lifetime prevalence rate estimates of PTSD vary considerably, because of differences in assessment measures, sampling strategies, and evolving diagnostic criteria since its inception into the diagnostic nomenclature. The Diagnostic and Statistical Manual of Mental Disorders, for instance notes that lifetime prevalence rates have been estimated between 1-14%.^[4] The lifetime prevalence of PTSD using DSM- IV criteria is estimated to be 8% among the adult population in the United States, although an additional 5-15% may experience subclinical forms of the disorder.^[9] The present study showed that the prevalence of probable PTSD was 58.6%; 71.4% of them exposed to trauma during their life. However, 33.6% had probable PTSD without exposure to trauma which may be due to one of the following reasons: denial specially when the type of trauma was rape, the development of PTSD symptomatology is linked to exposure to major trauma experienced by a very close relative or friend, or the trauma items of the questionnaire did not explicitly include childhood trauma, although, of course, most traumas could have been experienced in childhood as well as in adult life. The prevalence of probable PTSD among female students was significantly higher than that among male students and this finding is consistent with previous reports, which stated that female medical students were more worried about personal issues related to their future, family expectations, and emotional problems.^[14] All these factors made female students more vulnerable for PTSD than male students. The present study also showed that, the students from other governorates had PTSD more than those from Basrah governorate, who were living with their families; This result is comparable to another study done in Basrah, Iraq, which showed that the prevalence of stress was higher among students from other governorates than those in Basrah.^[15]

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